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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/690,077	10/16/2000	Alik Shimelmitz	RADI 17.486	2019
26304	7590	09/22/2004	EXAMINER	
KATTEN MUCHIN ZAVIS ROSENMAN 575 MADISON AVENUE NEW YORK, NY 10022-2585			WILSON, ROBERT W	
			ART UNIT	PAPER NUMBER
			2661	
DATE MAILED: 09/22/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/690,077

**Applicant(s)**

SHIMELMITZ ET AL.

**Examiner**

Robert W Wilson

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,5,10-17,19-24 and 28-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-17 & 30 is/are allowed.
- 6) ☒ Claim(s) 1,5,19-22,24,28 and 29 is/are rejected.
- 7) ☒ Claim(s) 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

**1.0** The application of Alik Shimelmitz et. al. entitled "CIRCUIT EMULATION SERVICE (CES) OVER IP" filed on 10/16/2000 without foreign priority and was amended on 6/30/04 was examined. Claims 1, 5, 10-17, 19-24, & 28-30 are pending.

The examiner discovered prior art which can be used to reject a claim that the examiner had previously objected to; consequently, the examiner is making this second action nonfinal.

#### *Claim Rejections - 35 USC § 103*

**2.0** The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**3.0** **Claims 1, 19, 20, 22, 24, & 28-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox et. al. (U.S. Patent No.: 6,459,708 B1) in view of Pierson Jr. (U.S. Patent No.: 6,272,128).

Referring to **Claim 1**, Cox teaches: A computer-based communication system implementing circuit emulation service over an Internet Protocol network (CES over IP, CESOIP) (Figs 4-9)

Circuit-data receiver to receive circuit data (601 per Fig 6 buffers or receives circuit data from Trunk INTERFACE LOGIC per Fig 5)

CE-to-IP function which further comprises (520 per Fig 5):

A Packetizer to pack said circuit-data into data packets (610 per Fig 6 or col. 13 line 39-col 14 line 39)

An Encapsulator to encapsulate said data packets with headers (620 per Fig 6 or col. 13 line 39-col 14 line 39)

And a Layer-2 incorporator to add layer-2 operations (620 per Fig 6 or col. 13 line 39-col 14 line 39 & col. 11 lines 51-65) wherein said IP network transmits said encapsulated data packets (630 per Fig 6)

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Wherein said circuit data includes a fractional T1 or fractional E1 transfer stream and where only time slots carrying information are packetized and carried over the IP network (The reference teaches packetizing and sending a T1 or E1 per Figs 5 and 9 or per col. 4 line 5-col. 5 line 59)

Cox does not expressly call for: wherein said circuit data includes a fractional T1 or fractional E1 and where only time slots carrying information are packetized and carried over the IP network but teaches packetizing and sending a T1 or E1 per Figs 5 & 9 or per col. 4 line 5-col. 5 line 59

Pierson, Jr teaches: wherein said circuit data includes a fractional T1 or fractional E1 and where only time slots carrying information are packetized and carried over the IP network (The applicant broadly claims "only time slots carrying information are packetized". The examiner respectively points out this limitation is super broad because all time slots in a fractional T1 or fractional E1 carry information. The reference teaches fractional T1s are encapsulated into an ATM cell or packet per Fig 7, Fig 8(a) & Fig 8(b) or col. 11 line 58-col 12 line 3.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add sending a fractional T1 or fractional E1 in an packets of Pierson, Jr. to the system of Cox which sends T1 or E1 which is a type of legacy traffic in order to send fractional T1 or E1 or E1 in a packet because they are also legacy traffic.

**In Addition Cox teaches:**

Regarding **Claim 19**, wherein said step of encapsulating data packets involves encapsulation with any of the following headers: RTP, UDP, and IP headers (The primary reference; Cox; teaches encapsulation in IP per Figs 4-6 or col. 14 lines 41-col. 15 line 50. The examiner takes official notice that useage of RTP, UDP, and IP headers in TCP/IP is well known in the art per Comer per Pg 98 and Pgs 197-206 & Pgs 539-551. It would have been obvious to one of ordinary skill in the art to add the IP packet information of Comer to the network of Cox because Comer describes all of the capabilities that are available for usage with TCP/IP which is an industry standard; thus, it would have been obvious to add these functions in order to be standards compliant.

Regarding **Claim 20**, wherein said system is implemented across networks comprising any of LANs, WANs, cellular, Internet or Web based networks (400 per Fig 4 or per col. 11 lines 51-65. It would have been obvious to one of ordinary skill in the art at the time of the invention that the HIGH SPEED DATA NETWORK is a LAN or WAN)

Regarding **Claim 22**, wherein said system further comprises a clock-recover to recover the circuit emulation clock across the packet network (The Cox teaches timing from the T1 and E1 is provided across the network in order to provide synchronization of the data per col. 14 line 25-col 15 line 3. The examiner takes official notice that recovery of the original T1 and E1 clock is well known in the art per Redman (U.S. Patent No.: 6,782,007 B1). Redman discloses that upon sending a T1 or E1 is ATM cells that the T1 or E1 clocks are converted to SRTS information in an ATM cell or packet and utilized to regenerate the original customer at the other end of the

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network. It would have been obvious to utilize the clock-recoverer of Redman with the system of Cox and Pierson in order to provide synchronization of T1 or E1 data across the network).

Referring to **Claim 24**, Cox teaches : A computer-based communication system implementing circuit emulation service over an Internet Protocol network (CES over IP, CESOIP) (Figs 4-9)

Receiving circuit data of a fractional T1 or fractional E1 transfer stream (601 per Fig 6 buffers or receives T1 or E1 circuit data from Trunk INTERFACE LOGIC per Fig 5)

Passing said circuit data through a CE-to-IP function (520 per Fig 5), which further includes the steps of:

Packing data into data packets (610 per Fig 6 or col. 13 line 39-col 14 line 39)

Encapsulating data with headers (620 per Fig 6 or col. 13 line 39-col 14 line 39)

Incorporating said data packets with layer-2 headers (620 per Fig 6 or col. 13 line 39-col 14 line 39 & col. 11 lines 51-65)

Transmitting said encapsulated and layer-2 incorporated data packets via a IP network (630 per Fig 6)

Only time slots carrying information are packed into data packets and carried over the IP network (The applicant broadly claims “only time slots carrying information are packetized”. The examiner respectively points out this limitation is super broad because all time slots in a T1 or E1 or fractional T1 or fractional E1 carry information. The primary reference Cox teaches send a T1 or E1 per Figs 4-6)

Cox does not expressly call for: Receiving circuit data of a fractional T1 or fractional E1 transfer stream but teaches a receiving circuit for a T1 or E1 transfer stream per Figs 4-6.

Pierson, Jr teaches: receiving circuit data of a fractional T1 or fractional E1 transfer stream (The reference teaches fractional T1s are encapsulated into an ATM cell or packet per Fig 7, Fig 8(a) & Fig 8(b) or col. 11 line 58-col 12 line 3.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add sending a fractional T1 or fractional E1 in an packets of Pierson, Jr. to the system of Cox which sends T1 or E1 which is a type of legacy traffic in order to send fractional T1 or fractional E1 in a packet because they are also legacy traffic.

**In Addition Cox teaches:**

Regarding **Claim 28**, wherein said step of encapsulating data packets involves encapsulation with any of the following headers: RTP, UDP, and IP headers (The primary reference; Cox;

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teaches encapsulation in IP per Figs 4-6 or per co. 14 line 41-col. 15 line 50. The examiner takes official notice that useage of RTP, UDP, and IP headers in TCP/IP is well known in the art per Comer per Pg 98 and Pgs 197-206 & Pgs 539-551. It would have been obvious to one of ordinary skill in the art to add the IP packet information of Comer to the network of Cox because Comer describes all of the capabilities that are available for usage with TCP/IP which is an industry standard; thus, it would have been obvious to add these functions in order to be standards compliant.)

Regarding **Claim 29**, wherein said method further includes the additional step of passing the data packets thorough a clock recovery function to recover the circuit emulation clock across the packet network (The Cox teaches timing from the T1 and E1 is provided across the network in order to provide synchronization of the data per col. 14 line 25-col 15 line 3. The examiner takes official notice that recovery of the original T1 and E1 clock is well known in the art per Redman (U.S. Patent No.: 6,782,007 B1). Redman discloses that upon sending a T1 or E1 is ATM cells that the T1 or E1 clocks are converted to SRTS information in an ATM cell or packet and utilized to regenerate the original customer at the other end of the network. It would have been obvious to utilize the clock-recoverer of Redman with the system of Cox and Pierson in order to provide synchronization of T1 or E1 data across the network).

### ***Claim Rejections - 35 USC § 102***

**4.0** The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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**5.0 Claims 5** is rejected under 35 U.S.C. 102(e) as being anticipated by Cox et. al. (U.S.

Patent No.: 6,459,708 B1)

Referring to **Claim 5**, Cox teaches: A computer-based communication system implementing circuit emulation service over an Internet Protocol network (CES over IP, CESOIP) (Figs 4-9)

Circuit-data receiver to receive circuit data (601 per Fig 6 buffers or receives circuit data from Trunk INTERFACE LOGIC per Fig 5)

CE-to-IP function which further comprises (520 per Fig 5):

A Packetizer to pack said circuit-data into data packets (610 per Fig 6 or col. 13 line 39-col 14 line 39)

An Encapsulator to encapsulate said data packets with headers (620 per Fig 6 or col. 13 line 39-col 14 line 39)

And a Layer-2 incorporator to add layer-2 operations (620 per Fig 6 or col. 13 line 39-col 14 line 39 & col. 11 lines 51-65) wherein said IP network transmits said encapsulated data packets (630 per Fig 6)

Wherein said packetizer packs data into packets via collecting only time slots carrying information from each TDM frame (The applicant broadly claims “only time slots carrying information are packetized”. The examiner respectively points out this limitation is super broad because all time slots in a T1 or E1 carry information. The reference teaches packetizing and sending a T1 or E1 per Figs 5 and 9 or per col. 4 line 5-col. 5 line 59 wherein all of the time slots carry information. )

And wherein said IP network transmits said encapsulated data packet (The reference teaches packetizing and encapsulating a T1 or E1 per Figs 5 & 9 or per col. 4 line 5-col. 5 line 59 and it should be noted that all of the time slots in a T1 carry information)

### ***Claim Rejections - 35 USC § 103***

**6.0** The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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**7.0 Claims 21** is rejected under 35 U.S.C. 103(a) as being unpatentable over Cox et. al. in view of Comer.

Referring to **Claim 21**, Cox teaches: A computer-based communication system implementing circuit emulation service over an Internet Protocol network (CES over IP, CESOIP) (Figs 4-9)

Circuit-data receiver to receive circuit data (601 per Fig 6 buffers or receives circuit data from Trunk INTERFACE LOGIC per Fig 5)

CE-to-IP function which further comprises (520 per Fig 5):

A Packetizer to pack said circuit-data into data packets (610 per Fig 6 or col. 13 line 39-col 14 line 39)

An Encapsulator to encapsulate said data packets with headers (620 per Fig 6 or col. 13 line 39-col 14 line 39)

And a Layer-2 incorporator to add layer-2 operations (620 per Fig 6 or col. 13 line 39-col 14 line 39 & col. 11 lines 51-65) wherein said IP network transmits said encapsulated data packets (630 per Fig 6)

An IP field for storing IP header information (IP packet per Fig 5) and wherein said IP network transmits said encapsulated data packets (531 per Fig 5 is connected to IP network or 440 per Fig 4)

Cox does not expressly call for: an IP field for storing IP header information; an UDP HEADER for storing UDP header information; RTP header for storing RTP header information; a data field for storing data, and an optional trailer field and wherein said IP network but teaches encapsulating T1 or E1 into IP per Fig 4 o Fig 5.

Comer teaches: an IP field for storing IP header information (Pg 98 and Pgs 197-206 & Pgs 539-551); an UDP HEADER for storing UDP header information (Pg 98 and Pgs 197-206 & Pgs 539-551); RTP header for storing RTP header information (Pg 98 and Pgs 197-206 & Pgs 539-551); a data field for storing data (Pg 98 and Pgs 197-206 & Pgs 539-551), and an optional trailer field (“optional trailer field” does not limit the scope of the claim per MPEP 2106, II,C consequently “optional trailer field” reflects intended use and was given no weight by the examiner”)

It would have been obvious to one of ordinary skill in the art to add the IP packet information of Comer to the network of Cox because Comer describes all of the capabilities that are available for usage with TCP/IP which is an industry standard; thus, it would have been obvious to add these functions in order to be standards compliant.



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### *Claim Objections*

**8.0** **Claim 23** is objected to because of the following informalities: calculator is misspelled in limitation “ a 2T-integral-caluator”. Appropriate correction is required.

The invention described in claim 23 is directed to a clock recover. The closest prior art is Cox (U.S. Patent No.; 6,459, 708) and Pierson, Jr. (U.S. Patent No.: 6,272,128) and Comer. Cox teaches a computer based system which converts legacy T1 telephony data into IP packets. Pierson Jr. teaches conversion of legacy fractional T1 telephony traffic into cells or packets. Comer teaches all of the functions that TCP/IP can perform and be standard compliant.

The closest prior art Cox (U.S. Patent No.; 6,459, 708) and Pierson, Jr. (U.S. Patent No.: 6,272,128) and Comer do not either singularly or in combination disclose, anticipate, or render the following claim limitations obvious **after the objection has been resolved**:

“a clock-recover further comprising:.....a resetter which rests all counter, starts new windows, and start receiving RTP packets” as claimed in **Claim 23**.

### *Allowable Subject Matter*

**9.0** The invention is directed to a computer base system implementing circuit emulation over IP said system comprising a circuit data receiver from VC-12, SDH framer, High order adaption function and a CE to IP function further comprising: packetizer, encapsulator, layer 2 incorporator, and packetizer including a packet transmit function that generates no packets when a loss of a pointer is detected.

The closest prior art is Cox (U.S. Patent No.; 6,459, 708) and Pierson, Jr. (U.S. Patent No.: 6,272,128) and Comer. Cox teaches a computer based system which converts legacy T1 telephony data into IP packets. Pierson Jr. teaches conversion of legacy fractional T1 telephony traffic into cells or packets. Comer teaches all of the functions that TCP/IP can perform and be standard compliant.

The closest prior art Cox (U.S. Patent No.; 6,459, 708) and Pierson, Jr. (U.S. Patent No.: 6,272,128) and Comer do not either singularly or in combination disclose, anticipate, or render the following claim limitations obvious:

“A circuit-data-receiver to receiver circuit data ....wherein said packetizer further including a packet transmit function that generates no packets when a loss of a point is detected” as claimed in **Claim 10**.

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“A circuit-data-receiver to receiver circuit data ....wherein said packetizer further including a packet transmit function that generates a special control packet when the HPA generates an error” as claimed in **Claim 11**.

“A circuit-data-receiver to receiver circuit data ....wherein said packetizer from the virtual container or VC-12 (SDH); a SDH framer,.....further including a packet transmit function that generates wherein said packetizer further includes a packet receiver function that detects loss or reception of erroneous UDP/RTP packet ” as claimed in **Claim 13**.

“a circuit-data –receiver to receive circuit data from a virtual container or VC-12 (SDH); a SDH framer; ....wherein said packetizer further includes a packet receive function that detects a loss of three consecutive VC-12 frames “ as claimed in **Claim 15**.

“a circuit-data –receiver to receive circuit data from a virtual container or VC-12 (SDH); a SDH framer; ....wherein said packetizer further includes a packet receive which outputs a AIS signal upon receipt of a control packet “ as claimed in **Claim 16**.

“receiving circuit data;...passing the data packets thorough a clock recovery function further comprising the steps of: resetting all counter, start new windows, and start receiving RTP packets” as claimed in **Claim 30**.

**In Addition:**

**Claim 12** is allowed because it depends upon **Claim 1**.

**Claim 14** is are allowed because it depends upon **Claim 13**.

**Claim 17** is allowed because it depends upon **claim 16**.

***Response to Arguments***

**10.0** Applicant's arguments with respect to **Claims 1,5, 19-24, & 28-29** have been considered but are moot in view of the new ground(s) of rejection.

The examiner respectively disagrees with the applicant's argument that the reference Cox (U.S. Patent No.: 6,459,708 B1) fails to teach “only time slots carrying information are packetized”. The applicant broadly claims “only time slots carrying information are packetized”. The examiner respectively points out this limitation is super broad because all time slots in a T1 or E1 or fractional T1 or fractional E1 carry information. Cox teaches encapsulating a T1 or E1 into an IP packet per Figs 4-6; consequently, Cox teaches “only time slots carrying information are packetized”.

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The examiner believes that applicant is trying to say that the invention is selecting specific timeslots within the TDM frame and packetizing those frames but the claim has a much broader meaning when the applicant claims utilizing "only time slots carrying data information" because all time slots in T1s, E1, fractional T1, or fractional E1 carry information.

The examiner further points out that Pierson (U.S. Patent No.: 6,272,128 B1) teaches encapsulating fractional T1 into a ATM cell or packet per col. 11 lines 57-col. 12 line 4. It would have been obvious to one of ordinary skill in the art at the time of the invention that a carrier provisions a whole T1 and only utilizes a subset of the timeslots to create a fractional T1; consequently, it would have been obvious to one of ordinary skill in the art at the time of the invention to select specific time slots from a T1 or E1 in order to create a cell or packet in order to perform circuit emulation on a fractional T1 or E1.

The examiner respectively disagrees with the applicant's argument that the new reference Redman (U.S. Patent No.: 6,782,007 B1) when combined with Cox fails to teach the clock recovery function.

The Cox teaches timing from the T1 and E1 is provided across the network in order to provide synchronization of the data per col. 14 line 25-col 15 line 3. The examiner takes official notice that recovery of the original T1 and E1 clock is well known in the art per Redman (U.S. Patent No.: 6,782,007 B1). Redman discloses that upon sending a T1 or E1 is ATM cells that the T1 or E1 clocks are converted to SRTS information in an ATM cell or packet and utilized to regenerate the original customer at the other end of the network. It would have been obvious to utilize the clock-recoverer of Redman with the system of Cox and Pierson in order to provide synchronization of T1 or E1 data across the network as well as in order for the invention to work.

### ***Conclusion***

**11.0** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571/272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert W Wilson

Examiner

Art Unit 2661

RWW

September 16, 2004



KENNETH VANDERPUYE  
PRIMARY EXAMINER